Section-A
Multiple Choice Questions (MCQ's)

Q-01: Choose the correct answer for each from the given option

(i) If $x^3 + 4x^2 - 7x + 3$ is divided by $x - 1$, then remainder is ____
(a) 0 (b) -1 (c) 1 (d) 2

(ii) In 35,30,10,48,100,90, the range(R) is ____
(a) 35 (b) 10 (c) 100 (d) 90

(iii) The central angle of a minor arc is ____ than the inscribed angle of its corresponding major arc.
(a) Less (b) Double (c) Half (d) None

(iv) If Set A contains 7elements and set B contains 3 elements, then A x B contains ____ order pairs.
(a) 12 (b) 21 (c) 3 (d) 7

(v) $x^4 - 0.4x^2 + 0.04 =$ ____
(a) $(x^2 - 0.2)^2$ (b) $(x - 0.2)^2$
(c) $(x^2 + 0.2)^2$ (d) $(x^2 + 0.2)(x^2 - 0.2)$

(vi) $\sqrt{1 - \sin^2(m\angle A)} =$ ____
(a) $1 - \sin(m\angle A)$ (b) $\sqrt{1 - \sin(m\angle A)}$
(c) $\cos(m\angle A)$ (d) $\operatorname{cosec}(m\angle A)$

(vii) in $\begin{vmatrix} a & b \\ c & d \end{vmatrix}$ the element of 1st row and 2nd column is ____
(a) a (b) b (c) c (d) d

(viii) $\sqrt[4]{81} =$ ____
(a) 2 (b) 3 (c) 9 (d) 4

(ix) The roots of the equation $ax^2 + bx - C = 0, a \neq 0$ are ____
(a) $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ (b) $\frac{b \pm \sqrt{b^2 - 4ac}}{2a}$
(c) $\frac{-b \pm \sqrt{b^2 + 4ac}}{2a}$ (d) $\frac{b \pm \sqrt{b^2 + 4ac}}{2a}$

(x) $2^5 = 32$ in logarithmic form is ____
(a) $\log_2 5 = 32$ (b) $\log_5 2 = 32$ (c) $\log_2 32 = 5$ (d) $\log_5 32 = 5$

(xi) The mantissa of the logarithm is ____
(a) positive (b) Negative (c) Both a & B (d) None

(xii) If non-common arms of two adjacent angles are collinear, they are ____
(a) Complementary Angles (b) Supplemenetary Angles
(c) Vertical Angles (d) Altermate Angles

(xiii) The ratio $a^{½} : b^{½}$ is called the sub-duplicate ratio of ____
(a) a:b (b) $a^3:b^3$ (c) $a^2 : b^2$ (d) $a^{1/4} : b^{1/4}$

(xiv) Every plane contains at least ____ non collinear points.
(a) 2 (b) 3 (c) 4 (d) None

(xv) The degree of the polynomial $x^4y + y^2 + y^3$ is ____
(a) 2 (b) 3 (c) 4 (d) 5

(xvi) if $\begin{vmatrix} 5 & 6 \\ 3 & -1 \end{vmatrix}$ then $A^t =$ ____
(a) $\begin{vmatrix} 6 & 5 \\ -1 & 3 \end{vmatrix}$ (b) $\begin{vmatrix} 3 & -1 \\ 5 & 6 \end{vmatrix}$ (c) $\begin{vmatrix} 5 & 3 \\ 6 & -1 \end{vmatrix}$ (d) $\begin{vmatrix} -1 & 6 \\ 3 & 5 \end{vmatrix}$

(xvii) if a:b = c:d, then b:a = d : c this properties of proportion is called____
(a) Altermando (b) Componendo (c) Dividendo (d) Invertendo

(xviii) A series contains values 14,14,14,14,14,14,14,14, its standard deviation is____
(a) 4 (b) 1 (c) 0 (d) -2.10

(xix) A perpendicualr from the vertex to the opposite side of a triangle is ____
(a) Altitude (b) Hypotenuse (c) Median (d) None

(xx) The value of sec 30° is ____
(a) $\frac{2}{\sqrt{3}}$ (b) $\sqrt{2}$ (c) 2 (d) $\frac{1}{2}$